

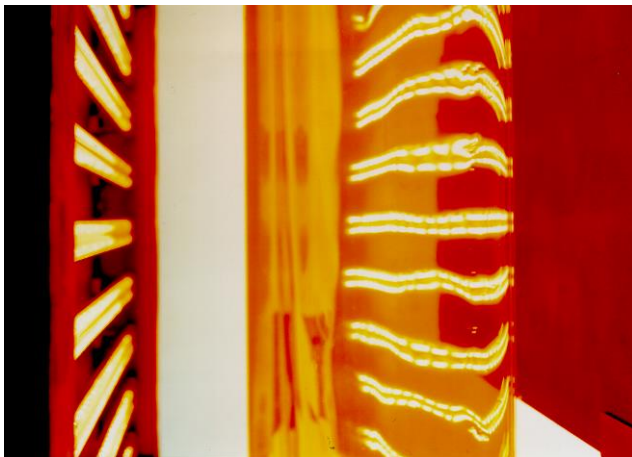


The Wavelength Converter

Infrared radiation transfers large amounts of energy in a short time. The effectiveness of the heating or drying of different materials depends on how well the material can absorb the radiation. Especially with thin materials, a large fraction of the radiation is lost as this fraction passes through the material without any heating effect.

Excelitas has found an ingeniously simple solution to this problem: a wavelength converter, consisting of an unbreakable and fireproof clay material, absorbs the radiation which has passed through the material and radiates it back into the material at a different wavelength. The wavelength converter absorbs transmitted infrared radiation, heats up to 500 - 600°C and then radiates back medium- and long wave radiation. Consequently, the fraction of infrared radiation which has passed through the material is captured by the converter and absorbed in the material with high efficiency.

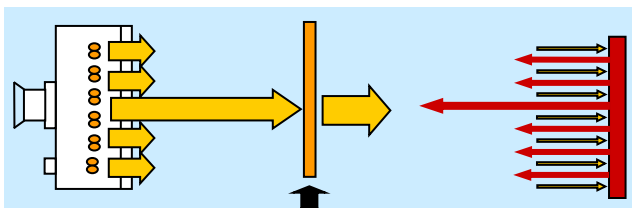
The wavelength converter can be tailored to the size of the IR module and the finishing plant where it is used. An IR wavelength converter requires only a small capital investment and significantly increases energy utilization.



Infrared Emitters

Foil

Wavelength Converter



The Benefits

- Energy saving
- Fast heating
- Shorter heating area
- Increase of efficiency
- Low investment cost
- Easy installation

Excelitas Technologies

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